FIG. 1

FIG.2

211 OBJECT	NE01			
212 UPPER LEVEL CONFIGURATION	NONE 213		214	
RESOURCE	OPERATIONAL STATE		ENABLE	
	ADMINISTRATIVE STATE		OPERATIONAL	
	∘∘		∘∘	
OBJECT	PORT 11			
UPPER LEVEL CONFIGURATION	NE 01			
RESOURCE	OPERATIONAL STATE		ENABLE	
	ADMINISTRATIVE STATE		OPERATIONAL	
	∘∘		∘∘	

210

∘∘

221 | 1999/1/23/19:15;STATE CHANGE;PORT 01

220

∘∘

231 MANAGEMENT REQUEST	232 EVENT TYPE	233 DEVICE TYPE	234 RESOURCE TYPE
STATE CHECK	STATE CHANGE	ATM	CTP
COMMUNICA-TION FAILURE	COMMUNICATION ALARM	ATM	CTP
			TTP
∘∘	∘∘	∘∘	∘∘

230

240 NUMBER OF EVENTS THAT CAN BE PROCESSED	100000000		

251 GROUP ID	CONSTITUTIONAL ELEMENT 252		
GROUP A	NE 01, NE 02, NE 03, NE 04, NE 05, NE 06, NE 07, NE 08,		
GROUP B	NE 09, NE 10, NE 11, NE 12, NE 13, NE 14, NE 15, NE 16,		

250

261 USER ID	USR000001				
262 PRIORITY LEVEL	1				
263 MANAGEMENT REQUEST	STATE CHECK, COMMUNICATION FAILURE				
264 AVAILABLE PATH	(DEVICE)	NE01	NE02	NE03	∘∘∘
	(RESOURCE)	PORT 11 PORT 12	PORT 22 PORT 25	PORT 32 PORT 35	∘∘∘
	∘∘	∘∘	∘∘		

260

FIG.3

GROUP B
302

GROUP A
301

NE 03
322

NE 02
321

NE 04
323

NE 01
320

NE 05
324

NE 06
325

NE 07
326

NE 08
327

332

331

330

333

335   334

337   336

FIG.4

MANAGING APPARATUS

NETWORK MANAGEMENT PROGRAM

MANAGEMENT INFORMATION DATABASE

405 405

EVENT CONTROL PROGRAM	EVENT ISSUING NUMBER DECISION PROCESSING UNIT	EVENT RECEPTION PROCESSING UNIT

401 404 401

NETWORK DEVICE

EVENT PARAMETER SETTING UNIT	402	EVENT TRANSMISSION CONTROL UNIT

EVENT ISSUING CONTROL PROGRAM

403

NETWORK DEVICE

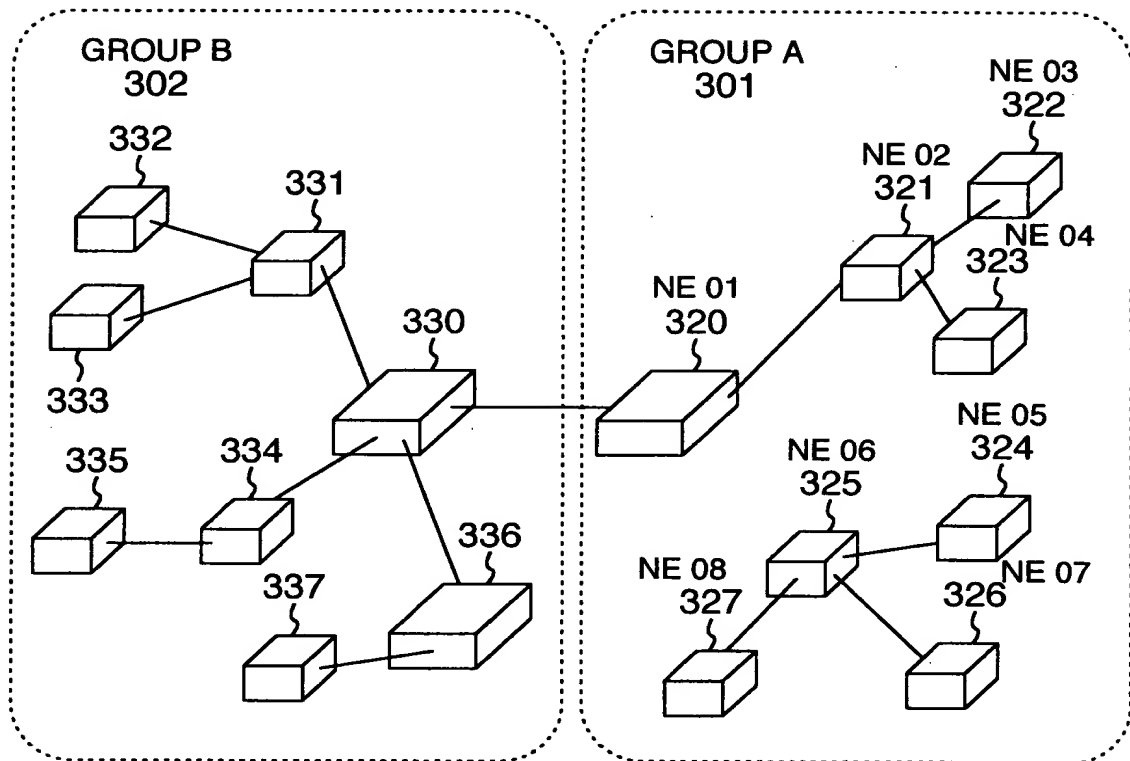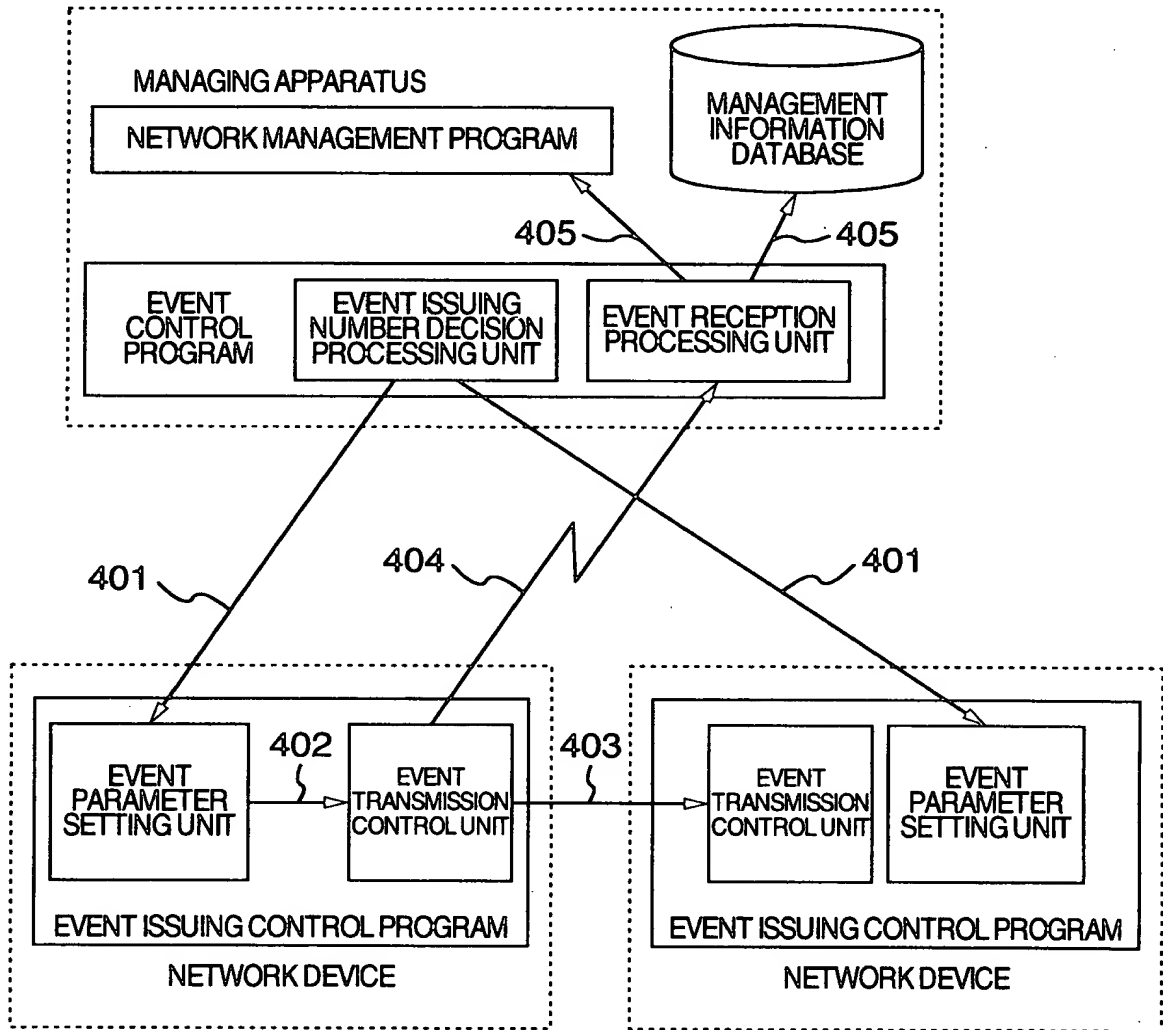| EVENT TRANSMISSION CONTROL UNIT	EVENT PARAMETER SETTING UNIT

EVENT ISSUING CONTROL PROGRAM

401: NOTIFICATION OF EVENT FILTER CONTROL INFORMATION
402: NOTIFICATION OF FILTERING PARAMETER
403: NOTIFICATION OF EVENT ISSUING
404: EVENT
405: NOTIFICATION AND STORAGE OF EVENT

FIG.5

```
                    ┌──────────────┐
                    │    START     │
                    └──────┬───────┘
                           ▼
          ┌────────────────────────────────────┐
          │    COLLECT PERFORMANCE INFORMATION  │──── 501
          │        OF MANAGING APPARATUS        │
          └────────────────┬───────────────────┘
                           ▼
          ┌────────────────────────────────────┐
          │      BASED ON MANAGEMENT REQUESTS,  │
          │   DERIVE THE NUMBER OF EVENTS ISSUED │──── 502
          │     BY INDIVIDUAL NETWORK DEVICES   │
          └────────────────┬───────────────────┘
                           ▼
          ┌────────────────────────────────────┐
          │    CALCULATE ALLOWABLE EVENT ISSUING │──── 503
          │        NUMBER FOR EACH DEVICE       │
          └────────────────┬───────────────────┘
                           ▼
          ┌────────────────────────────────────┐
          │ NOTIFY EVENT ISSUING NUMBERS BEGINNING│
          │         WITH NETWORK DEVICE         │──── 504
          │  WITH SMALLER EVENT ISSUING NUMBER  │
          └────────────────┬───────────────────┘
                           ▼
                    ┌──────────────┐
                    │     END      │
                    └──────────────┘
```

FIG.6

ALLOWABLE EVENT NUMBER	300	
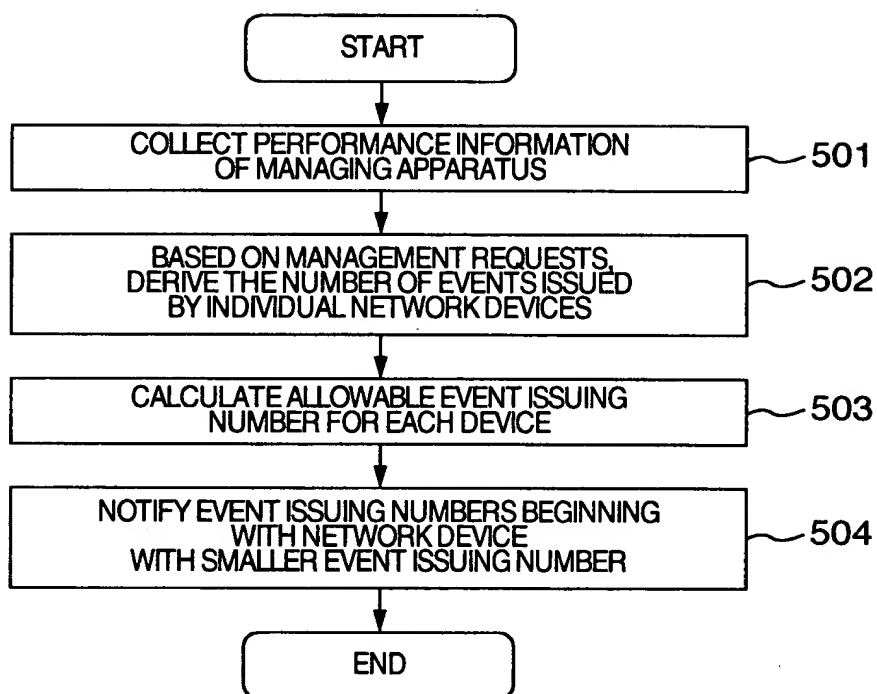
	EVENT TYPE	EVENT PRIORITY LEVEL	EVENT CONDITION
EVENT TRANSMISSION INFORMATION	COMMUNICATION ALARM	1	CLASS CTP, RDN = "Port 11"
	COMMUNICATION ALARM	3	CLASS CTP, RDN = "Port 12"
	⋮	⋮	⋮

	NETWORK DEVICE	ALLOWABLE EVENT NUMBER
GROUP INFORMATION	NE 02	200
	NE 03	250
	⋮	⋮

FIG.7

START

↓

SET FILTERING CONDITION AND
GENERATE EVENT FLAG TABLE — 701

↓

702 — IS EVENT RECEIVED
FROM NETWORK RESOURCE
?   NO

YES

↓

COUNT FROM COLLECTED HARDWARE
THE NUMBER OF EVENTS
THAT MEETS FILTERING CONDITION — 703

↓

ISSUE EVENT ISSUANCE NOTIFICATION
TO OTHER DEVICES — 704

↓

705 — LESS THAN ALLOCATED
EVENT NUMBER
?   NO

YES

706

707

SEND EVENTS
TO MANAGING APPARATUS

EVENT ISSUING
CONTROL PROCESSING

↓

ISSUE EVENT TERMINATION NOTIFICATION
TO OTHER DEVICES — 708

↓

END

FIG.8

START

CALCULATE SUM OF EVENTS ALLOCATED TO DEVICES WHOSE FLAGS ARE NOT SET IN EVENT ISSUING FLAG TABLE, AND CALCULATE THE NUMBER OF EVENTS THAT CAN BE ADDITIONALLY ISSUED ⟶ 801

802 ⟶ IS THE NUMBER OF EVENTS ISSUED LARGE ? — NO

YES

803 — DETERMINE EVENT TRANSMISSION PRIORITY LEVEL

SEND EVENTS TO MANAGING APPARATUS ⟶ 804

805 ⟶ DO EVENTS TO BE TRANSMITTED STILL REMAIN ? — NO

YES

END

806 ⟶ VALUE OF EVENT ISSUING FLAG TABLE CHANGED ? — NO

YES

RECALCULATE THE NUMBER OF EVENTS THAT CAN BE ADDED ⟶ 807

808 ⟶ NUMBER OF EVENTS ISSUED IS LARGE AND PRIORITY LEVEL IS NOT SET — NO

YES

FIG.9

	902	903	904	905	906	901
	0	0	0	0	0	...

NE01 NE02 NE03 NE04 NE05
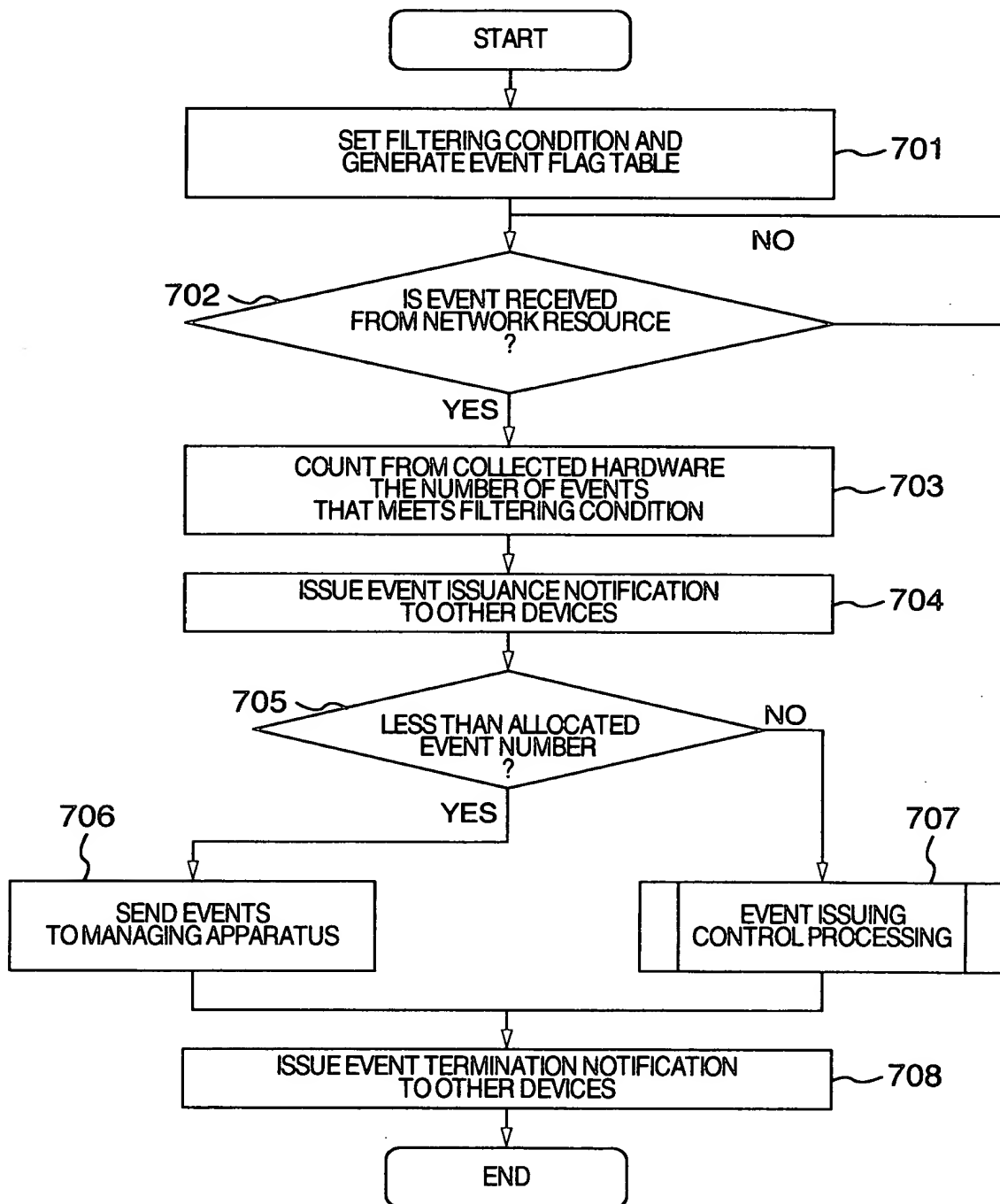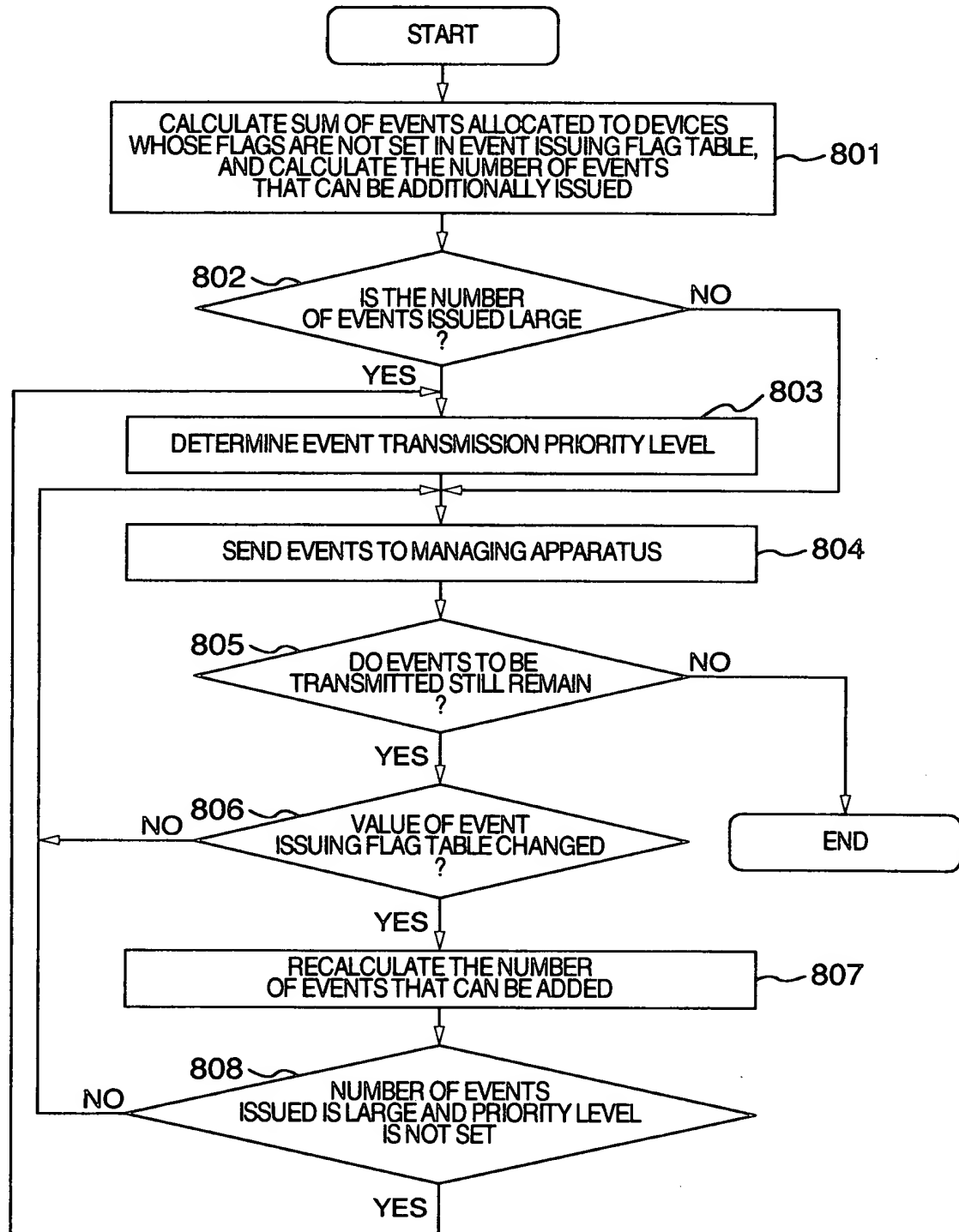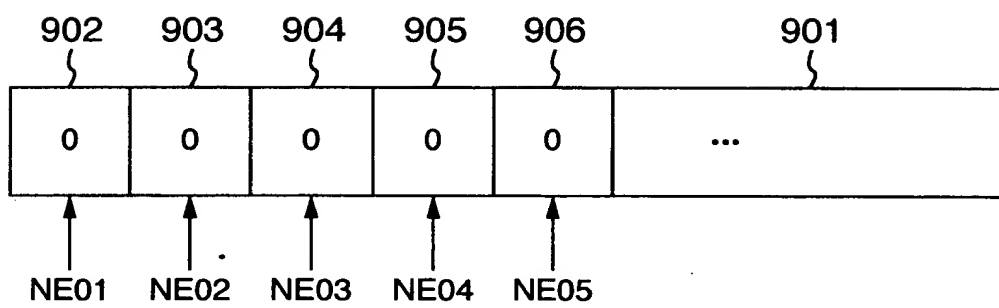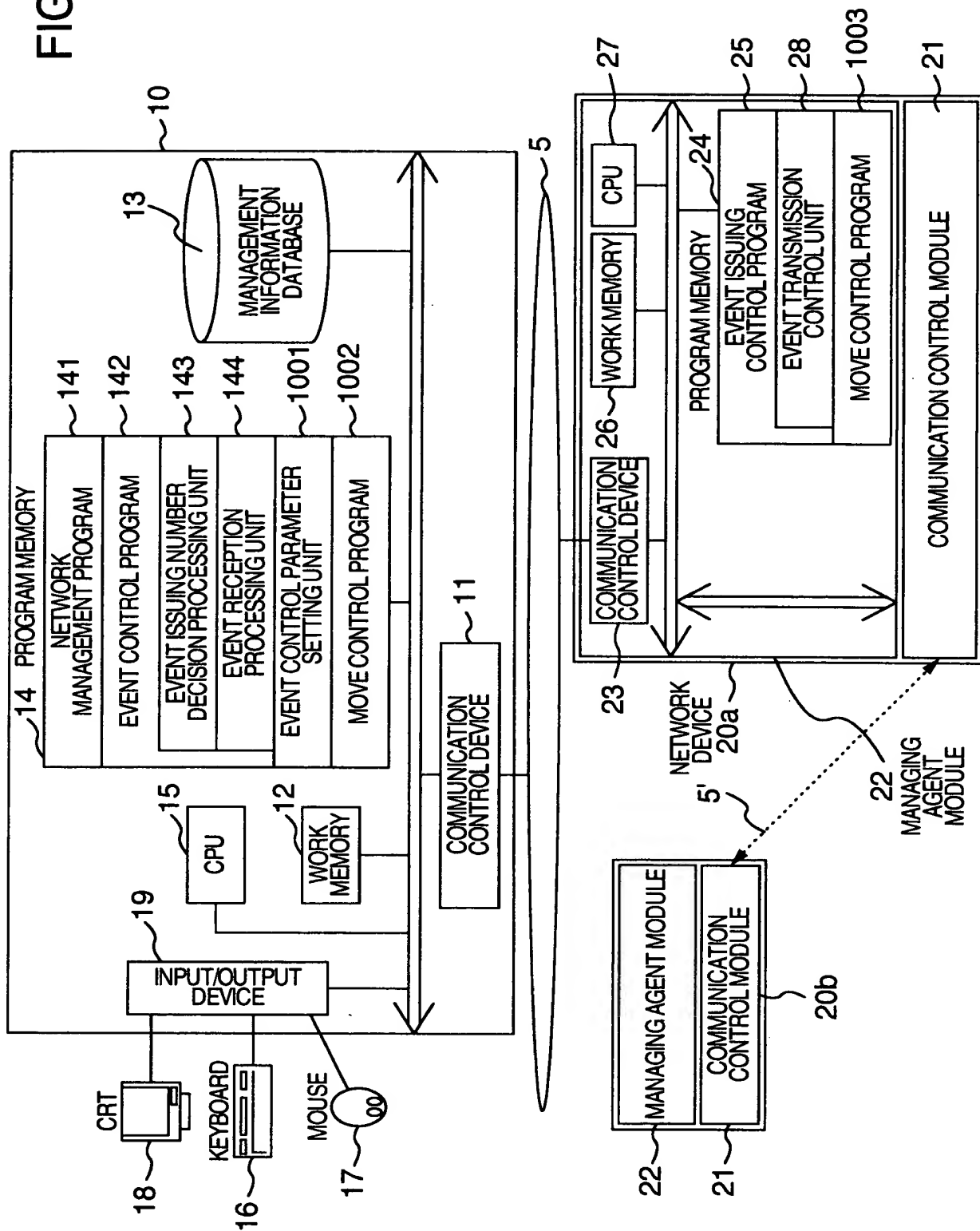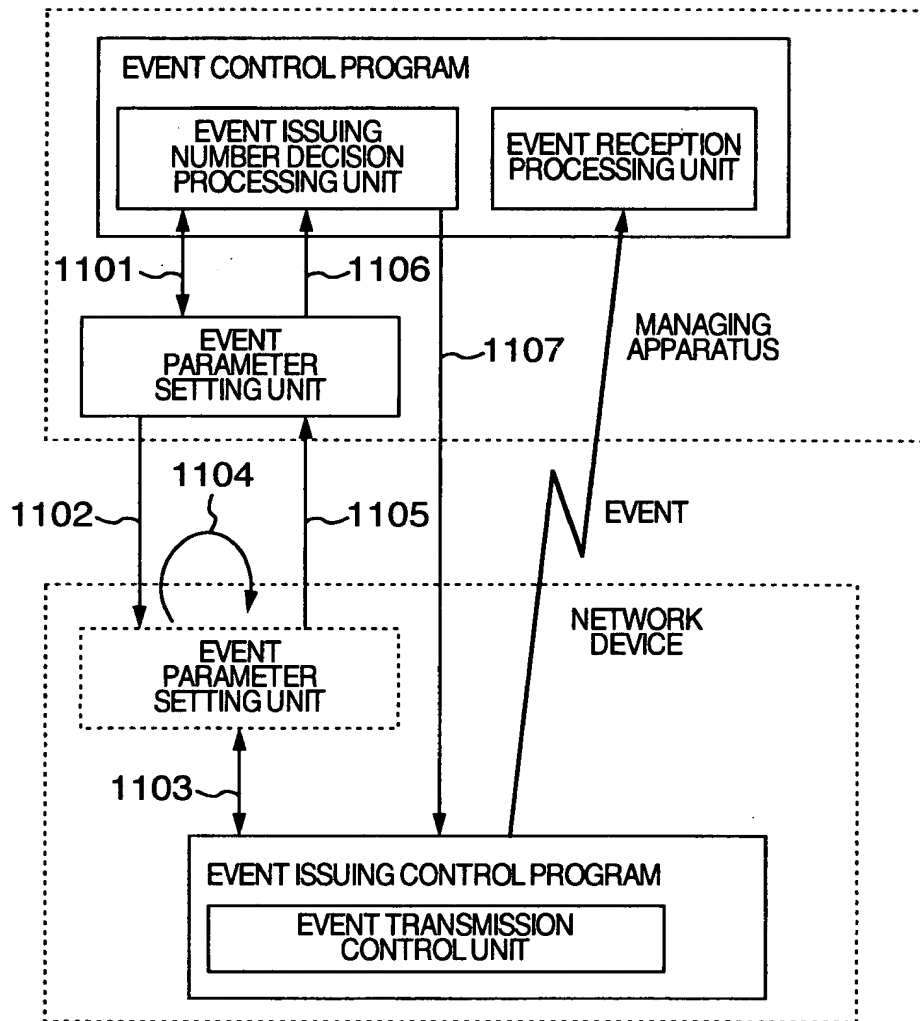
0: EVENT NOT ISSUED
1: EVENT ISSUED

FIG.10

FIG.11

1101: EVENT TYPE AND SETTING PATH
1102: MOVING
1103: COLLECTION OF EVENT FILTER INFORMATION, CHANGE OF FILTERING CONDITION
1104: MOVING TO OTHER NETWORK DEVICE
1105: MOVING
1106: NOTIFICATION OF INCREASED OR DECREASED NUMBER OF EVENTS ISSUED
     FROM NETWORK DEVICE ON SET PATH
1107: NOTIFICATION OF ALLOWABLE EVENT NUMBER

FIG.12

```
                    ┌─────────────┐
                    │    START    │
                    └─────────────┘
                           │
                           ▼
        ┌──────────────────────────────────────┐
        │ SEARCH FOR PRESENT FILTERING CONDITION│──~1201
        │    CORRESPONDING TO EVENTS IN DEVICE  │
        └──────────────────────────────────────┘
                           │
                           ▼
                    ╱────────────╲  ~1202
                  ╱                ╲
                ╱  ARE RELATED EVENTS ╲    NO
                ╲   FILTERED         ╱──────────┐
                  ╲      ?          ╱           │
                    ╲────────────╱              │
                         │ YES                  │
                         ▼                      │
        ┌──────────────────────────────────────┐│
        │ DELETE OR MODIFY FILTERING PARAMETER  ││~1203
        │ SO THAT NECESSARY EVENTS CAN BE NOTIFIED││
        └──────────────────────────────────────┘│
                         │                      │
                         ▼                      │
        ┌──────────────────────────────────────┐│
        │ HOLD THE NUMBER OF EVENTS GENERATED   ││~1204
        └──────────────────────────────────────┘│
                         │                      │
                         ▼                      │        1206
                    ╱────────────╲  ~1205           ┌──────────────┐
                  ╱                ╲                 │ MOVE TO DEVICE│
                ╱  RELATED DEVICES   ╲    NO         └──────────────┘
                ╲   SEARCHED        ╱──────────────────────┘
                  ╲      ?          ╱
                    ╲────────────╱
                         │ YES
                         ▼
        ┌──────────────────────────────────────┐
        │ NOTIFY AN INCREASE OR DECREASE        │──~1207
        │      TO MANAGING APPARATUS            │
        └──────────────────────────────────────┘
                         │
                         ▼
                    ┌─────────┐
                    │   END   │
                    └─────────┘
```